***REMARKS***

Claims 1-19 are currently pending in the application. By the amendment claims 15-19 are added for the Examiner's consideration. The above amendments do not add new matter to the application and are fully supported by the specification. Applicants respectfully request reconsideration and timely withdrawal of the pending objections and rejections for the reasons discussed below.

**35 U.S.C. § 102 Rejection**

Claims 1-14 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Application Publication No. 2004/0054572 issued to OLDALE et al. ("OLDALE"). Applicants respectfully traverse this rejection for at least the following reasons.

While Applicants recognize that this rejection can be overcome by filing a certified English language translation of the priority document upon which the instant application claims priority under 35 U.S.C. § 119, Applicants are not doing so at this time because it is believed that the instant rejection is improper.

In order to establish a *prima facie* case of anticipation under 35 U.S.C. § 102, a single prior art reference must disclose each and every element as set forth in the subject claim. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987). Applicants respectfully submit that a *prima facie* case of anticipation cannot be established because OLDALE fails to teach each and every element of the claims.

Independent claim 1 recites, in pertinent part:

> computing a plurality of similarity factors based on:
> at least one advisee profile from at least one newly rated

item and determining which at least one user has already rated the item, wherein the advisee profile for a recommendation system comprises a plurality of records, each record including a user identifier, an item identifier, and a rating value, such that each record is linked in a first and a second dimension;

generating a recommendation of at least one item of the selected item list, according to the previously provided ratings of the at least one item by the neighboring users.

Independent claim 7 recites, in pertinent part:

each record including a user identifier, an item identifier, and a rating value, wherein each record is linked in a first and a second dimension, the first dimension linking records with a same user identifier in a sequence according to the item identifier, and the second dimension linking records with a same item identifier in a sequence according to the user identifier.

Independent claim 8 recites, in pertinent part:

receiving a recommendation request comprising a selected item list from the advisee for the recommendation by a recommendation system;

in response to the recommendation request, computing a plurality of similarity factors based on at least one advisee profile from at least one newly rated item and determining which at least one user has already rated the item, and

generating a recommendation of at least one item from the selected item list based on ratings provided by each neighboring user.

*Independent claim 1*

In rejecting independent claim 1, the Examiner points to paragraph [0342] of OLDALE as disclosing "receiving a recommendation request comprising a selected item list from an advisee for a recommendation by a recommendation system". Applicants disagree. Paragraph [0342] of OLDALE merely states the following;

[0342] When estimating the profile of the user requesting a recommendation we can, in effect, treat profiles as containing just the last two attributes, and use the likelihood function for ratings in place of the more complex likelihood function for histories.

There is no language in the noted passage disclosing receiving a recommendation request comprising a selected item list from an advisee for a

recommendation by a recommendation system. Nor has the Examiner shown how the noted language can be read or interpreted to disclose the recited feature.

The Examiner also points to paragraph [0069] of OLDALE as disclosing "in response to the recommendation request, computing a plurality of similarity factors based on: at least one advisee profile from at least one newly rated item and determining which at least one user has already rated the item, wherein the advisee profile comprises a plurality of records, each record including a user identifier, an item identifier, and a rating value, such that each record is linked in a first and a second dimension". Applicants disagree. Paragraph [0069] of OLDALE merely states the following;

> [0069] In one embodiment of the invention, the item profiles obtained by the method of the invention could be stored such that subsequently a particular item could be specified and items which were similar to that particular item would then be recommended. The specified item could be compared to other items for which item profiles were available using for example a similarity metric based on the item profiles. A recommendation of other items which were similar to the specified item could then be made to the user.

There is no language in the noted passage disclosing in response to the recommendation request, computing a plurality of similarity factors based on: at least one advisee profile from at least one newly rated item and determining which at least one user has already rated the item, wherein the advisee profile comprises a plurality of records, each record including a user identifier, an item identifier, and a rating value, such that each record is linked in a first and a second dimension. Nor has the Examiner shown how the noted language can be read or interpreted to disclose the recited feature.

The Examiner additionally points to paragraph [0082] of OLDALE as disclosing "selecting, from the plurality of users of the recommendation system, neighboring users to the advisee, according to the similarity factors". Applicants disagree. Paragraph [0082] of OLDALE merely states the following;

> [0082] Preferably therefore, users are given the opportunity of giving additional details about their preferences over and above rating the items about which they are asked. Thus, the users can provide more information about their preferences than is currently usable in the prediction of the suitability of an item for a user or can be displayed as output in the system at the time at which they input the data. Thus, for example, a user might be asked whether or not she had been to each of four locations and she would answer yes or no for each of these. If the user wished to do so however, she could add additional information either in the form of, say, other locations which she had visited (resulting in a horizontal broadening of the data set) or she could, for example, specify the attractions which she had visited at each of the four locations (resulting in a vertical deepening of the data set). Thus, in vertical deepening of the data set, the user will provide data relating to one or more attributes (e.g. the attractions at a particular location) of one or more of the items for which data is obtained.

Applicants fail to recognize any language in the noted passage disclosing selecting, from the plurality of users of the recommendation system, neighboring users to the advisee, according to the similarity factors. Nor has the Examiner shown how the noted language can be read or interpreted to disclose the recited feature.

The Examiner also points to paragraphs [0082] and [0105] of OLDALE as disclosing "generating a recommendation of at least one item of the selected item list, according to the previously provided ratings of the at least one item by the neighboring users". Applicants disagree. Paragraphs [0082] and [0105] of OLDALE merely states the following;

> [0082] Preferably therefore, users are given the opportunity of giving additional details about their preferences over and above rating the items about which they are asked. Thus, the users can provide more information about their preferences than is currently usable in the prediction of the suitability of an item for a user or can be displayed as output in the system at the time at which they input the data.

> Thus, for example, a user might be asked whether or not she had been to each of four locations and she would answer yes or no for each of these. If the user wished to do so however, she could add additional information either in the form of, say, other locations which she had visited (resulting in a horizontal broadening of the data set) or she could, for example, specify the attractions which she had visited at each of the four locations (resulting in a vertical deepening of the data set). Thus, in vertical deepening of the data set, the user will provide data relating to one or more attributes (e.g. the attractions at a particular location) of one or more of the items for which data is obtained.
>
> [0105] In an alternative preferred embodiment, the manager of the database could generate a fixed number of phantom cases. The profile of an item for which insufficient data was available would be specified by the manager to be a weighted average of some other items and the phantom cases would be specified to rate that item with ratings which depending on the manually determined profile. Whenever a new actual case was added to the database, a phantom case could be removed. Thus, over time, the updated case profile would increasingly reflect the observations for actual cases.

Applicants fail to recognize any language in the noted passages disclosing generating a recommendation of at least one item of the selected item list, according to the previously provided ratings of the at least one item by the neighboring users. Nor has the Examiner shown how the noted language can be read or interpreted to disclose the recited feature.

Finally, on page 3 of the Office Action, the Examiner opines that "it would have been obvious to one of ordinary skill in the art to adapt the invention in Oldale for the uses in the instant invention". Applicants fail to see the relevancy of such statements in view of the fact that the Examiner has merely asserted that OLDALE anticipates the invention. To the extent that the Examiner basis the instant rejection on an obviousness argument, the Examiner should clearly state this to be the case and formulate a 35 U.S.C. 103 rejection.

*Independent claim 7*

In rejecting independent claim 7, the Examiner points to paragraph [0463] of OLDALE as disclosing "a user profile for a recommendation system, comprising a plurality of records, each record including a user identifier, an item identifier, and a rating value, wherein each record is linked in a first and a second dimension, the first dimension linking records with a same user identifier in a sequence according to the item identifier, and the second dimension linking records with a same item identifier in a sequence according to the user identifier". Applicants disagree. Paragraph [0463], as well as paragraphs [0464] – [0470] of OLDALE merely states the following;

> [0463] Identify a data set of observations that can be used to predict the suitability of the items. Data can be gathered from a number of sources including:
> [0464] from a website
> [0465] by questionnaire or survey
> [0466] by phone
> [0467] from bank records, store card records or other sources of transaction history
> [0468] customer service records
> [0469] loyalty card records
> [0470] obtained from third party sources

There is no language in the noted passage disclosing a user profile for a recommendation system, comprising a plurality of records, each record including a user identifier, an item identifier, and a rating value, wherein each record is linked in a first and a second dimension, the first dimension linking records with a same user identifier in a sequence according to the item identifier, and the second dimension linking records with a same item identifier in a sequence according to the user identifier. Nor has the Examiner shown how the noted language can be read or interpreted to disclose the recited feature.

Finally, on page 5 of the Office Action, the Examiner opines that "it would have been obvious to one of ordinary skill in the art to adapt Oldale". Applicants fail to see the relevancy of such statements in view of the fact that the Examiner has merely asserted that OLDALE anticipates the invention. Again, to the extent that the Examiner basis the instant rejection on an obviousness argument, the Examiner should clearly state this to be the case and formulate a 35 U.S.C. 103 rejection.

*Independent claim 8*

In rejecting independent claim 8, the Examiner points to paragraph [0342] of OLDALE as disclosing "receiving a recommendation request comprising a selected item list from an advisee for a recommendation by a recommendation system". Applicants disagree. As noted above, paragraph [0342] of OLDALE merely states the following;

> [0342] When estimating the profile of the user requesting a recommendation we can, in effect, treat profiles as containing just the last two attributes, and use the likelihood function for ratings in place of the more complex likelihood function for histories.

There is no language in the noted passage disclosing receiving a recommendation request comprising a selected item list from an advisee for a recommendation by a recommendation system. Nor has the Examiner shown how the noted language can be read or interpreted to disclose the recited feature.

The Examiner also points to paragraph [0069] of OLDALE as disclosing "in response to the recommendation request, computing a plurality of similarity factors based on at least one advisee profile from at least one newly rated item and determining which at least one user has already rated the item". Applicants disagree. Paragraph [0069] of OLDALE merely states the following;

> [0069] In one embodiment of the invention, the item profiles obtained by the method of the invention could be stored such that subsequently a particular item could be specified and items which were similar to that particular item would then be recommended. The specified item could be compared to other items for which item profiles were available using for example a similarity metric based on the item profiles. A recommendation of other items which were similar to the specified item could then be made to the user.

There is no language in the noted passage disclosing in response to the recommendation request, computing a plurality of similarity factors based on: at least one advisee profile from at least one newly rated item and determining which at least one user has already rated the item. Nor has the Examiner shown how the noted language can be read or interpreted to disclose the recited feature.

The Examiner additionally points to paragraph [0004] of OLDALE as disclosing "selecting neighboring users from the first set of users based on similarities between the advisee and each member of the first set of users". Applicants disagree. Paragraph [0004] of OLDALE merely states the following;

> [0004] One known filtering method, memory based reasoning (MBR), correlates the preferences of users in the data set for various items with preferences provided by the user for some of the items in the data set. The system then recommends to the user other items that similar users in the data set liked. However, this method can be slow if all other users in the data set are used to make a recommendation, involves losing information if only a subset is used, and is subject to known sources of inaccuracy such as how to weight the preferences of each of a set of very similar users since the informational content of each is low. Consequently, the method is disadvantageous (and may not be practical) in situations where there is a large data set, i.e. a large number of users recommending a large number of items. The method is also disadvantageous in that an operator cannot see how the recommendations made correspond to the dataset. This is a particular problem in certain marketing situations where transparency of the recommendations made is required.

Applicants fail to recognize any language in the noted passage disclosing selecting neighboring users from the first set of users based on similarities between the

advisee and each member of the first set of users. Nor has the Examiner shown how the noted language can be read or interpreted to disclose the recited feature.

The Examiner also points to paragraphs [0082] and [0105] of OLDALE as disclosing "generating a recommendation of at least one item from the selected item list based on ratings provided by each neighboring user". Applicants disagree. Paragraphs [0082] and [0105] of OLDALE merely states the following;

> [0082] Preferably therefore, users are given the opportunity of giving additional details about their preferences over and above rating the items about which they are asked. Thus, the users can provide more information about their preferences than is currently usable in the prediction of the suitability of an item for a user or can be displayed as output in the system at the time at which they input the data. Thus, for example, a user might be asked whether or not she had been to each of four locations and she would answer yes or no for each of these. If the user wished to do so however, she could add additional information either in the form of, say, other locations which she had visited (resulting in a horizontal broadening of the data set) or she could, for example, specify the attractions which she had visited at each of the four locations (resulting in a vertical deepening of the data set). Thus, in vertical deepening of the data set, the user will provide data relating to one or more attributes (e.g. the attractions at a particular location) of one or more of the items for which data is obtained.
>
> [0105] In an alternative preferred embodiment, the manager of the database could generate a fixed number of phantom cases. The profile of an item for which insufficient data was available would be specified by the manager to be a weighted average of some other items and the phantom cases would be specified to rate that item with ratings which depending on the manually determined profile. Whenever a new actual case was added to the database, a phantom case could be removed. Thus, over time, the updated case profile would increasingly reflect the observations for actual cases.

Applicants fail to recognize any language in the noted passages disclosing generating a recommendation of at least one item from the selected item list based on ratings provided by each neighboring user. Nor has the Examiner shown how the noted language can be read or interpreted to disclose the recited feature.

On pages 5-6 of the Office Action, the Examiner opines that "it would have been obvious to one of ordinary skill in the art to adapt the invention in Oldale for the uses in the instant invention". Again, Applicants fail to see the relevancy of such statements in view of the fact that the Examiner has merely asserted that OLDALE anticipates the invention. To the extent that the Examiner basis the instant rejection on an obviousness argument, the Examiner should clearly state this to be the case and formulate a 35 U.S.C. 103 rejection.

Finally, on page 7 of the Office Action, the Examiner requests that Applicants fully consider the disclosure of the applied document even though only certain portions of the prior art document have been cited by the Examiner in rejecting the recited claim features. Applicants remind the Examiner that it is the Examiner who bears the initial burden in establishing the basis of a prior art rejection. Applicants are not required to read the entire disclosure of a prior art document in order to find features which might disclose or suggest each and every recited feature of the claims. The Examiner cannot properly shift the burden of setting forth a *prima face* case of anticipation to Applicants.

Because claims 1, 7 and 8 each recite at least one element not disclosed, or even suggested, by OLDALE, Applicants submit that the instant rejection of claims 1-14 should be withdrawn.

***New Claims are also Allowable***

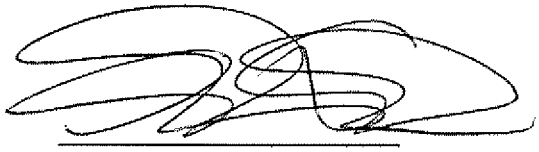
Applicants submit that the new claims 15-19 are allowable over the applied art of record. Specifically, claims 15-19 depend from claims 1, 7 and 8 which are believed to be allowable. Additionally, claims 15-19 recite a combination of features which are

clearly not disclosed or suggested by the applied art of record. Accordingly, Applicants respectfully request consideration of these claims and further request that the above-noted claims be indicated as being allowable.

## CONCLUSION

In view of the foregoing amendments and remarks, Applicants submit that all of the claims are patentably distinct from the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue. The Examiner is invited to contact the undersigned at the telephone number listed below, if needed. Applicants hereby make a written conditional petition for extension of time, if required. Please charge any deficiencies in fees and credit any overpayment of fees to Deposit Account No.09-0457.

Respectfully submitted,
Ralf BERTRAM, *et al.*



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